

FORECAST DISCUSSION FOR MAY 1, 2103

We've finished the May 1, 2013 Water Supply Index (WSI) and Bulletin 120 (B120) forecasts. The forecasts include observed conditions through the end of April.

The forecasts are posted at:

WSI: <http://cdec.water.ca.gov/cgi-progs/iodir/wsi>

B120: <http://cdec.water.ca.gov/cgi-progs/iodir?s=b120>

Forecast Summary:

The projected median April-July runoff in the major Sierra river basins ranges from 13 percent for the Tule River to 68 percent for the Pit River. Forecasted median Water Year runoff ranges from 23 percent for the Tule River to 71 percent for the Feather River. Near record dry conditions have persisted since December resulting in dry runoff predictions. The WSI forecast can be summarized as follows:

Sacramento River Unimpaired Runoff Water Year Forecast	11.9 MAF
(50 percent exceedance)	(65 percent of normal)
Sacramento Valley Index (SVI)	5.8
(50 percent exceedance)	(Dry)
San Joaquin Valley Index (SJI)	1.6
(75 percent exceedance)	(Critical)

The SVI and the SJI water year classifications are unchanged from last month.

Runoff:

For April, early snow melt was evident with the highest monthly percent of average runoff since December in most Central Valley rivers. Flows ranged from 18 percent on the Tule River to 86 percent on the Tuolumne River. Regionally, the San Joaquin River region experienced the highest percent of average April flows (77 percent) followed by the Tulare Lake region (58 percent) and the Sacramento River (56 percent). The Sacramento Region has the highest Water Year-to-date average at 71 percent. The San Joaquin and Tulare Lake regions have flowed at rates of 70 and 52 percent of average. Statewide year-to-date runoff average at the end of April was 68 percent.

Precipitation:

Record dry conditions continued through the end of April. The 1.5 inch gain in the Northern Sierra 8-Station index during April amounts to 38 percent of the monthly average. This makes the fourth consecutive month of well-below normal precipitation. The January through April total precipitation (8.1 inches) in the Northern Sierra 8-Station index was the driest on record for this index. The next driest January through April was in 1977 when 9.7 inches were recorded. The 8.1 inches gained represents just 29 percent of the [average](#) amount of precipitation gained during this time. The water year to date total of 41.1 inches represents 90 percent of the seasonal average to date and 82 percent of an average water year total.

Similar dry conditions exist in the San Joaquin region. The April total observed precipitation of 1.9 inches represents 54 percent of the historical monthly average – the wettest month by percentage since December which isn't saying much. The January through April total precipitation of 6.1 inches ranks as the driest on record for this index – the previous driest year was 1977 at 7.7 inches. The 6.1 inches gained in the SSI represents just 25 percent of the normal amount of precipitation gained during this

time. The water year to date total of 25.1 inches represents 67 percent of the seasonal average to date and 62 percent of an average water year total.

At the conclusion of the first seven months of the water year, precipitation (based on all available reporting gauges per basin) was 78 percent of average to date in the Sacramento River Region, 65 percent of average to date in the San Joaquin River Region, and 51 percent of average to date in the Tulare Lake Region. Statewide, water year cumulative precipitation through April was 66 percent of average to date.

Snowpack:

Snowpack is monitored using two complementary methods: automatic snow sensor (or “pillow”) readings and manual snow course measurements. The snow sensors give us a daily snapshot of snow conditions while the manual snow course measurements provide a monthly verification of snow conditions in locations where snow has been measured in the same manner as far back as 100 years.

On May 1, snow sensors recorded a snow pack that was 17 percent of average in the Northern Sierra, 25 percent of average in the Central Sierra, and 10 percent of average in the Southern Sierra. Statewide, snow water equivalent based on snow pillow data was 18 percent of the May 1 average and 14 percent of the historical April 1 average.

Results from the 171 snow courses measured this month revealed that the snow covered area has been diminished drastically throughout the state. Statewide there were 88 snow courses (or about half the courses measured this month) that were bare and no snow could be measured. Measurements in the Sacramento River Valley watersheds recorded a snow pack that is 11 percent of the historical May 1 average. Measurements in the San Joaquin Valley and Tulare Lake regions registered a snow pack that is 24 and 7 percent of the May 1 average respectively. Statewide, the snow pack was measured at 15 percent of the May 1 average and 12 percent of the April 1 average.

Weather and Climate Outlook:

The weather outlook is dry for the next six days. Currently, the freezing level is about 10,000 feet. During the next three days (Thursday-Saturday), the freezing level is expected to increase to near 14,500 feet over all of the Sierra. These conditions are expected to persist through Monday.

The NWS Climate Prediction Center’s (CPC) 30-day outlook for May, issued on April 30, 2013, suggests equal chances of above and below normal precipitation for all of California except the northern third of the state where there is an increased chance of below normal precipitation. The same outlook calls for an increased chance of warmer than normal temperatures for all of the Sierra.

The CPC’s three-month outlook (May through July), updated April 18, 2013, suggests equal chances of above and below normal temperatures for all of California except for the Southern Sierra, Mojave Desert and lower Colorado River region where above normal temperatures are expected. The precipitation outlook calls for equal chances of above and below normal precipitation except for the northern fifth of the state where below normal precipitation is ~~are~~ forecast.

Next Update:

A Bulletin 120 Update for conditions on May 14 will be available Thursday, May 16.

If you have any questions regarding this forecast, please contact a member of the Snow Surveys staff. We are delighted to help.

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